

# **INEEL SNF PROGRAM**

*presented to*

**National Spent Nuclear Fuel Program  
Technical Exchange Meeting  
October 19 - 21, 2004  
Las Vega, NV**

*presented by*

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**October 19, 2004**

## **1.0 The INEEL EM-Managed SNM Program**



**CPP-651 Unirradiated Fuel Storage Facility**

# **1.1 INEEL's SNM Management Strategy**

## **1. Complete the Denitrator Repackaging Campaign by 09/30/04:**

- Repackage 311 cans (~ 1,776 kg) of highly enriched uranium (high-grade reprocessed fuel product) and ship offsite.**

- 1. This material is for reuse under sponsorship of the National Nuclear Security Administration. It will be down blended and fabricated into LEU fuel.**

- 2. Category C material is to be shipped to the Savannah River Site (SRS) for further purification prior to dilution and formulation into low enriched uranium for fabrication into fuel suitable for energy production.**

- 3. Categories A, B, and Custom material is to be shipped directly to the fuel fabricator, Nuclear Fuel Services (NFS).**

# **1.1 INEEL's SNM Management Strategy**

## **1. Complete the Denitrator Repackaging Campaign by 09/30/04:**

### **Status and Accomplishments:**

#### **1. Category C material Destined for SRS.**

- **On 05/04/04, all Category C product material shipped to SRS ( 51 original container equivalents in 39 shipments via commercial carrier).**
- **On 09/20/04, all Category C samples and standards material shipped to SRS (single shipment via commercial carrier).**

#### **2. Categories A, B, and Custom material Destined for NFS.**

- **On 06/23/04 – 46% Category A and B material shipped to NFS (120 original container equivalents in a single shipping campaign via SST).**
- **On 08/31/04 – 33% Category A and B material shipped to NFS (85 original containers equivalents a single shipping campaign via SST.**
- **On 09/28/04 – 21% Category A and B material shipped to NFS (55 original containers equivalents a single shipping campaign via SST.**

**Project is complete.**

# **1.1 INEEL's SNM Management Strategy**

## **2. Empty CPP-651:**

- CPP-651 is the only EM-managed Category I SNM Facility at the INEEL. Emptying the facility will reduce overall security and ;program costs at INTEC.**

### **Status and Accomplishments:**

**The following objectives have been set**

- 1.Reduce Material Category Level from Level I to Level II by 01/31/05. Estimated savings: ~\$2M/yr. Status - yellow**
- 2.Accelerate Emptying of the Facility from 09/30/09 to 09/30/05. Estimated savings: ~\$600K/yr. Status - green**

# **1.1 INEEL's SNM Management Strategy**

## **3. Disposition all Remaining Materials by 09/30/09**

- **Materials located outside of CPP-651 are likely to require disposal.**

### **Status and Accomplishments:**

- **Other program offices have been alerted to the availability of these materials.**
- **No interest was the response.**
- **Highest risk material (U-233) has been evaluated.**
- **Dispositioning discussions have been initiated.**
- **A basic plan has been established.**

## **1.2 Recent Accomplishments for the INEEL SNM Program**

### **Recent accomplishments**

**FY1997 – Shipped offsite 28.3 kg U (85 containers)**

**FY1998 – Shipped offsite 175.4 kg U (79 containers)**

**FY1999 – Shipped offsite 5.2 kg U (15 containers)**

**FY2000 – Shipped offsite 16.5 kg U (19 containers)**

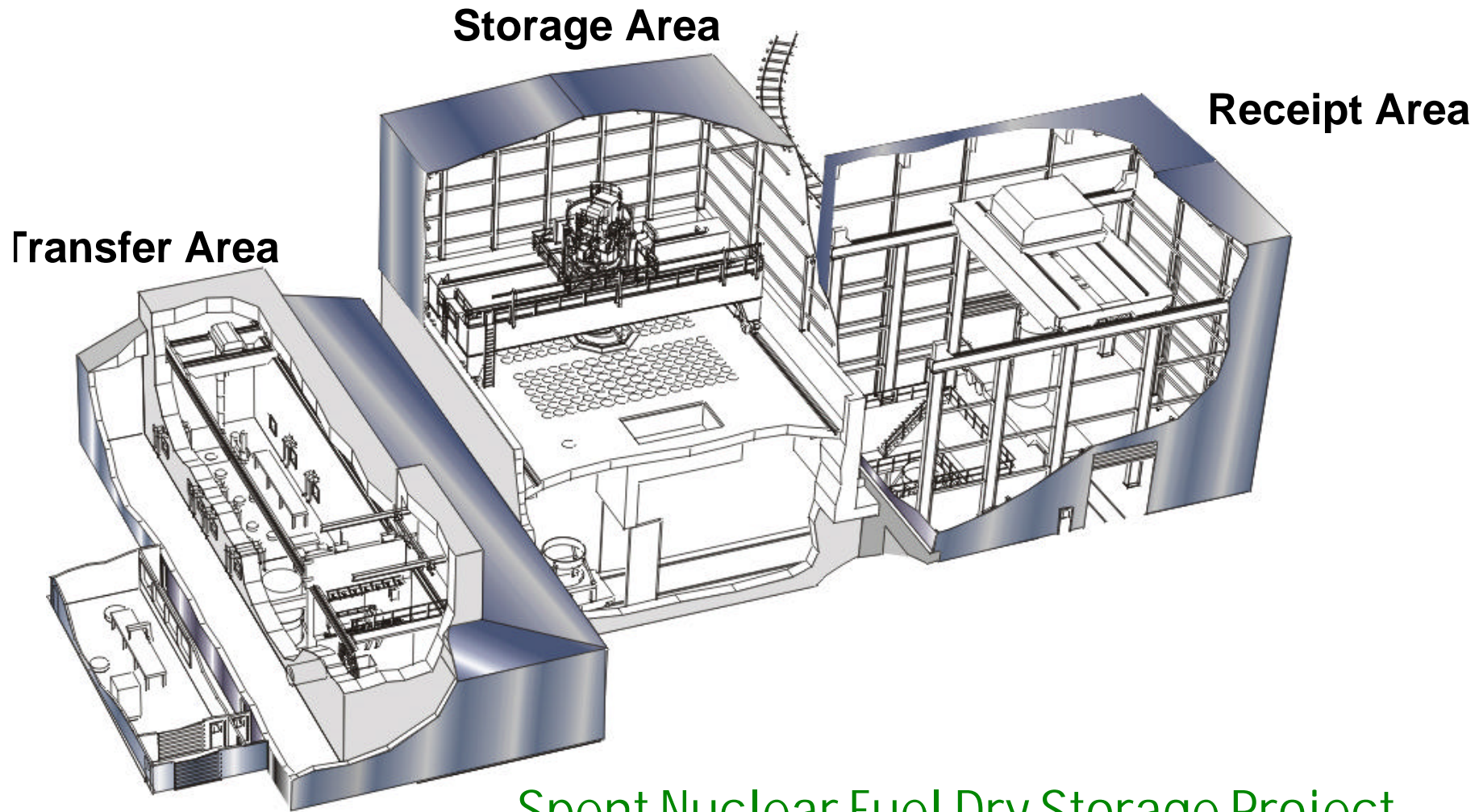
**FY2002 – Shipped offsite 5.4 kg U (7 containers)**

**FY2003 – Shipped offsite 27.0 kg U (15 containers)**

**FY2004 – Shipped offsite 12.4 kg U (13 containers) Rover/PARKA**

**FY2004 – Shipped offsite 1,776 kg U (311 containers) Denitrator  
Product**

## 2.0 The INEEL EM-Managed Spent Nuclear Fuel Program



## 2.1 INEEL's Spent Fuel Management Strategy

### 1. Perform national responsibilities:

- Receive domestic fuels; and
- Receive FRR fuels.

### Status and Accomplishments:

- 46 truck cask equivalents during the period FY98-FY04

	1998	1999	2000	2001	2002	2003	2004	Total
<b>FRR</b>	3	5	1	3	0	1	2	15
<b>DRR</b>	0	0	0	0	0	31	2	33
<b>Total</b>	3	5	1	3	0	32	4	46

## 2.1 INEEL's Spent Fuel Management Strategy

### 2. Address vulnerabilities:

- Place wet stored SNF into interim dry storage by 12/31/23.

### Status and Accomplishments:

- As of 09/15/03, five of six wet storage pools containing EM-managed legacy SNF have been emptied.
- The sixth must be emptied by 01/01/2023 ? 09/30/12

SNF Wet Storage Facility	Date Emptied
TRA-660, ARMF/CFRMF Canal	10/28/1997
CPP-603, Basins	04/28/2000
TRA-603, MTR Canal & Plug Storage	09/24/2002
TAN-607, Basin	09/29/2002
PBF-620, Pool	09/15/2003
CPP-666, Basins	09/30/2012 (planned)

## **2.1 INEEL's Spent Fuel Management Strategy**

### **3. Consolidate spent fuel storage areas:**

- **Relocate all SNF into a single management area at INTEC.**

#### **Status and Accomplishments:**

- **As of 09/15/03, four of five SNF facilities containing EM-managed legacy SNF have been consolidated at INTEC.**
- **The fifth is undergoing fuel transfer now.**

<b>SNF Storage Facility</b>	<b>Date Emptied</b>
TRA-660, ARMF/CFRMF Canal	10/28/1997
TRA-603, MTR Canal & Plug Storage	09/24/2002
TAN-607, Basin	09/29/2002
PBF-620, Pool	09/15/2003
TAN-791, Dry Storage Pad	11/30/2004 (planned)

## **2.1 INEEL's Spent Fuel Management Strategy**

### **4. Make DOE-owned legacy SNF road-ready:**

- Support removal from Idaho and Colorado by 01/01/35.**

#### **Status and Accomplishments:**

- DOE determines to design, NRC-license, build and operate the SNFDSP**

<b>12/92</b>	<b>Initial Feasibility Studies published.</b>
<b>11/94</b>	<b>Second Short Data Form submitted requesting 1998 LICP funding.</b>
<b>03/96</b>	<b>Mission Need Document for SNF DS Project.</b>
<b>06/96</b>	<b>Project validated as a 1998 LICP.</b>
<b>01/97</b>	<b>DOE redefines acquisition strategy from standard LICP to a privatization procurement.</b>
<b>01/99</b>	<b>DOE releases RFP.</b>
<b>05/00</b>	<b>DOE awards contract to Foster Wheeler.</b>
<b>11/01</b>	<b>The license application was submitted to the NRC.</b>
<b>03/02</b>	<b>The NRC accepted the license application for formal review.</b>
<b>11/04</b>	<b>NRC grants license.</b>

## **2.2 FY2004 Accomplishments for the INEEL SNF Program**

**10/03/03 – Received the fourth of five shipments of SNF from the Oak Ridge Reservation into CPP-603/IFSF.**

**10/03/03 – Received one cask of FRR SNF from Japan into CPP-603/IFSF.**

**11/20/03 – Received one cask of DRR SNF from the Cornell University into CPP-603/IFSF.**

## **2.2 FY2004 Accomplishments for the INEEL SNF Program**

**12/03/03 – Received the fifth of five shipments of SNF from the Oak Ridge Reservation into CPP-603/IFSF.**

**04/13/04 – Cut, packaged, and transferred 1-1/2 rods of Peach Bottom SNF stored within the CPP-603/FECF to the CPP-603/IFSF**

**04/26/04 – Received two casks of FRR SNF from Indonesia into CPP-603/IFSF.**

## **2.2 FY2004 Accomplishments for the INEEL SNF Program**

**08/19/04 – Received two casks of DRR SNF from the University of Illinois into CPP-603/IFSF.**

**09/23/04 – Received the seventh of seven planned onsite FY04 ATR SNF transfers (100%) at CPP-666 from the TRA.**

## **3.0 The Future**

### **3.1 Projected accomplishments**

**All EM-managed SNM out of CPP-651 by 09/30/05.**

**All EM-managed SNM will have been shipped offsite by 09/30/2009.**

**All INEEL SNF management will be consolidated at INTEC with the transfer of six outdoor storage casks from TAN-791 to CPP-2707 by 11/30/2004.**

**The last wet storage facility will be emptied with the transfer of SNF managed at CPP-666 to several dry storage facilities located at INTEC, ANL-W and NRF in 09/30/2012.**

## **3.0 The Future**

### **3.2 A New Contract**

**New EM contract is scheduled to be in place 05/01/05. The INEEL EM-managed SNF and SNM programs will have expanded scope.**

**The programs will receive and manage certain materials from the NE program. The contractor shall:**

- 1. Transfer approximately 5kg of SNF (listed in Table C.7 of the RFP) from TRA to safe storage at INTEC by September 30, 2009.  
[13 separate items/categories of material; ~ 4.5 kg U.]**
- 2. Dispose or disposition approximately 417 kg of SNM (listed in Table C.6 of the RFP) from TRA to an approved DOE or commercial disposal or storage facility by September 30, 2009.  
[47 separate items/categories of material; ~ 416.5 kg U.]**

## **3.0 The Future**

### **3.3 Programmatic Reorganization at the INEEL**



## **3.0 The Future**

### **3.4 SNF Programmatic Reorganization at the INEEL**

#### **3.4.1 Current**

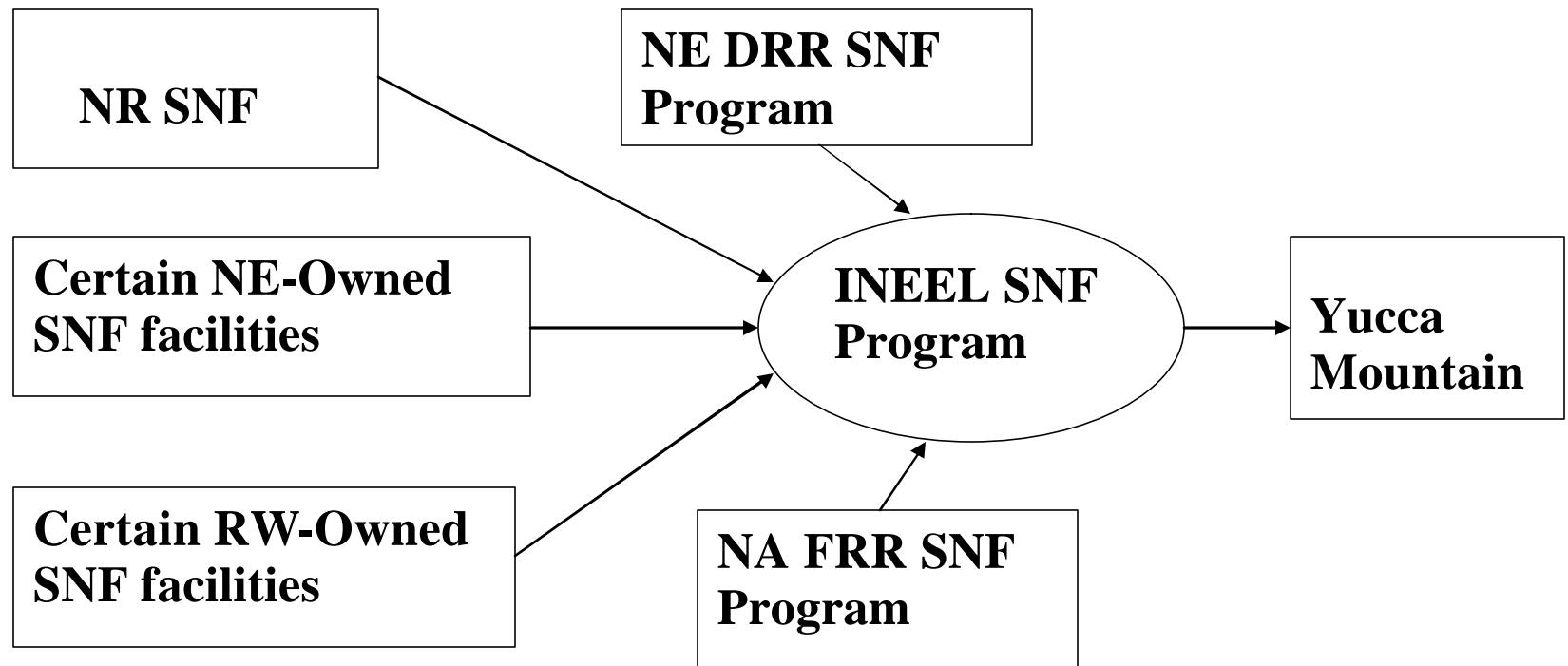
##### **INEEL SNF Program**

- **NR – Manage naval SNF**
- **RW – Interactions to understand WAC and license**
- **NE – Certain SNF transfers for treatment**
- **DRR SNF Receipts Program**
- **FRR SNF Receipts Program**
- **All EM-managed SNF Facilities**

## 3.0 The Future

### 3.4 SNF Programmatic Reorganization at the INEEL

#### 3.4.2 Future 1



## 3.0 The Future

### 3.4 SNF Programmatic Reorganization at the INEEL

#### 3.4.2 Future 2

